United States Department of Agriculture

Final Environmental Impact Statement for Revision of the Inyo National Forest Land Management Plan

Executive Summary

Forest Service Pacific Southwest Region R5-MB-304-F August 2018

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Summary

Introduction and Background

The U.S. Forest Service has prepared a final environmental impact statement for the revised Inyo National Forest Land Management Plan, also referred to as the forest plan. The environmental impact statement describes and analyzes in detail five alternatives for managing the land and resources of the Inyo National Forest. The final environmental impact statement describes the affected environment and discloses the environmental effects of the proposed plan and its alternatives. Table S-1 and table S-2 compare alternatives, and table S-3 provides a summary of the potential effects of those alternatives.

The Inyo National Forest is currently being managed under the 1988 Inyo National Forest Land and Resource Management Plan, as amended. In 2012, the Inyo, Sierra and Sequoia National Forests began to revise their forest plans. One draft environmental impact statement was prepared for the three national forests and released for public comment in May 2016. Due to recent drought-induced tree mortality on the west slope of the Sierra Nevada range, and the corresponding need to address the changed conditions, the Sierra and Sequoia National Forests are preparing a revised draft environmental impact statement. Because tree mortality was not as severe on the Inyo National Forest, the Forest Service decided to prepare this separate final environmental impact statement and plan.

Purpose and Need for Revising the Forest Plan

The Inyo National Forest is revising its original 1988 forest plan to meet the legal requirements of the National Forest Management Act of 1976, address changed conditions since then, incorporate new scientific information, and address changes in law, regulation, and policy, including the 2012 Planning Rule.

Economic, social, and ecological conditions have changed during the 30 years that the current forest plan has been in place. The changes in ecological conditions across the landscape have increased the risk of large high-intensity wildfire. The ability of the Inyo National Forest to provide benefits to people as well as habitat for wildlife has changed. New information based on monitoring and scientific research helps illuminate these changes and inform contemporary approaches for addressing them. In addition, new laws, regulations and policies are in place.

Several “needs for change” were identified through assessments and engagement with local governments, state and federal agencies, tribes, and the public. The needs for change were grouped into three revision topics that provided a framework for the alternative development and analysis. These are summarized below each revision topic.

Revision Topic 1: Wildland Fire Management

There is a need to reduce the risk of large high-intensity wildfires to communities and assets such as recreation sites and infrastructure; increase the ability to manage wildfires to meet resource objectives;[1] and reduce smoke impacts to communities.

[1] A strategic choice to use unplanned wildfire starts to achieve resource management objectives and ecological purposes under specific environmental conditions. Such fires are monitored closely to ensure safe conditions for people, property, and other highly valued resources.

Revision Topic 2: Ecological Integrity

There is a need to restore the resilience of vegetation and aquatic and riparian ecosystems to fire, drought and climate impacts; restore wildlife and plant habitat and diversity; and reduce the risk of large high-intensity wildfire impacts to species and their habitat.

Revision Topic 3: Sustainable Recreation and Designated Areas

There is a need to provide sustainable and diverse recreation opportunities that consider population demographics, reflect the desires of local communities, avoid overcrowding and use conflicts, minimize resource impacts, protect cultural resources, update direction for management of wilderness and wild and scenic rivers, and protect the values of the Pacific Crest National Scenic Trail.

Proposed Action

The Proposed Action is the draft forest plan that was developed to address the needs for change and revision topics. The proposed action is alternative B and is summarized below; a detailed description and analysis can be found in chapter 2 of the final environmental impact statement.

The proposed action is one of the five alternatives analyzed in detail as described below.

Public Involvement and Issues to be Resolved

Public participation is critical to many steps in the process of revising the forest plan. Chapter 1 of the FEIS describes the formal and informal public engagement that occurred throughout the process with public meetings, workshops, tribal forums, dialog sessions, document review and comment periods, and interagency and tribal consultations. The information shared during these sessions helped shape the management approaches and plan components in the revised plan.

In addition, public review of the initial proposed action in August 2014 raised specific issues associated with the proposed action. Issues are defined as statements that describe potential unwanted effects of the proposed action. The following issues were identified from public engagement sessions and public comments related to the proposed action during the 2014 public scoping period and the comment period for the DEIS in May 2016. These issues were key to development of alternatives B-modified, C, and D. Chapter 1 of the final environmental impact statement includes specific concerns associated with these issue statements.

Issue 1: Ecological Resilience, Wildlife Habitats, and Wildfire

The amount, type, and location of thinning to improve ecosystem resilience to large, high-intensity wildfires and to reduce the threat of wildfires to communities may not provide adequate habitat for wildlife species that use forests with large trees and dense canopy cover.

Issue 2: Forest Resilience and Forest Density

The limitations on effectively treating enough areas to reduce the density of trees and the level of fuels because of concerns for wildlife habitats will leave too much of the forest at risk of loss or unacceptable damage from wildfires or insect attacks during droughts exacerbated by climate change.

Issue 3: Fuels Treatments and Fire Management

The amount of prescribed fire and managed wildfire used to meet resource objectives may not be sufficient to restore fire in frequent-fire ecosystems. The amount of fire restored to the landscape may not be achievable without reducing existing fuels before treatment.

Issue 4: Watershed Restoration

The amount of watershed restoration in the proposed revised plans may not keep pace with the increased stresses to aquatic and riparian systems from drought and climate change.

Issue 5: Protecting Aquatic Diversity

The proposed revised plans may not adequately protect areas of high aquatic species diversity.

Issue 6: Recommended Wilderness

The proposed revised plans offer an opportunity to manage more areas as recommended wilderness to protect them from development for future generations. However, recommending additional wilderness areas in the proposed revised plans might unnecessarily prohibit and further geographically constrain management activities and uses, including Tribal uses that would otherwise be allowed.

Issue 7: Smoke

Increasing the amount of prescribed burning, and allowing the management of wildfires to meet resource objectives would produce more smoke that might impact human health and affect the tourism-based and resource-based economies of counties and rural communities.

Issue 8: Forest Products

The amount of forest management activities and forest product outputs may not adequately contribute to sustaining local and regional industry infrastructure needed to accomplish restoration objectives.

Alternatives

Current forest plan, the proposed action, and alternatives to the proposed action comprise the alternatives studied in detail. In total, the final environmental impact statement documents analyzes five alternatives in detail (summarized below) and seven alternatives considered but not analyzed in detail. These are described in detail in chapter 2 of the final environmental impact statement.

Alternative A: Existing Plan Direction

Alternative A is the no-action alternative, which represents current management under the 1988 forest plan, as amended. As the no action, alternative A does not address the needs for change that are reflected in the revision topics, or issues raised during scoping.

Wildland Fire Management. Hazardous fuel reduction treatments would continue to focus on two distance-based areas (defense and threat zones) in the wildland-urban intermix, with more intense thinning allowed in the defense zone (closest to structures and communities). Using wildfire to meet resource objectives would continue with general direction about desired vegetative conditions but not specifically tied to wildfire. Prescribed fire ignitions would be coordinated with adjacent landowners to meet ambient air quality standards.

Ecological Integrity. Restoration treatment options would continue to be limited by standards and guidelines for vegetation, single-species habitat management, and aquatic and riparian management focusing treatments at local (stand or patch) levels rather than landscape scales. Dense canopy cover and large trees would be retained to meet certain species needs, and conflicts with habitat needs of other species would remain. Plan components and direction would limit impacts to critical aquatic refuges and riparian conservation areas around streams, rivers, lakes, meadows, bogs, and other wetland types. At-risk species consist of federally-listed species under the Endangered Species Act and Forest Service sensitive species. Management actions emphasize consistency across national forest boundaries for protection of greater sage grouse, and current management continues, including restrictions on operating periods and grazing as needed to protect California spotted owl, great gray owl, Pacific fisher, Sierra marten, Sierra Nevada bighorn sheep and Nelson desert bighorn sheep, willow flycatcher, and Yosemite toad.

Sustainable Recreation and Designated Areas. Direction that was developed in the 1980s would continue, focusing on the maintenance, development, adaptation, or alteration of dispersed and developed recreation sites consistent with the recreation opportunity spectrum class of the area, including increasing the amount of trails and facilities. Scenic character is managed using the 1986 Visual Management System with assigned visual quality objectives. No additional areas would be recommended for designation in the national wilderness preservation system, and management of designated wilderness is guided by specific guidance in wilderness management plans. Management direction for protecting the scenic and recreational values of the Pacific Crest National Scenic Trail outside of designated wilderness is limited.

Alternative B: Draft Forest Plan

Alternative B includes proposed changes in management to address the needs for change, which are organized by revision topics, as follows:

Wildland Fire Management. Alternative B includes four strategic fire management zones that replace the two distance-based wildland-urban intermix areas in the current plan. The fire management zones are based on fire risk assessment consistent with the National Cohesive Wildland Fire Management Strategy.[2] There is an emphasis on managing naturally ignited fires to achieve resource objectives, and mechanical treatments and prescribed fire are used as well. The four fire management zones are:

- **Community wildfire protection zone**. This zone is based on modeling potential spread and intensity of wildfires that have a very high likelihood of burning into and negatively impacting communities and community assets. Active management (thinning and prescribed fire) would be used to reduce fuels throughout the zone, and snags, logs, and fuels would be

[2] The National Cohesive Wildland Fire Management Strategy is guidance for agencies to work collaboratively across all landscapes, using best science, to make meaningful progress towards three goals: resilient landscapes, fire-adapted communities, and safe and effective wildfire response.

managed for safe wildfire operations. In most cases, wildfire would be suppressed unless specific conditions allowed for safe use of wildfire to meet resource objectives.

- **General wildfire protection zone.** This zone is delineated where wildfire has a very high likelihood of burning toward and negatively impacting communities and assets as well as negatively impacting natural resources. Active fuel reduction treatments would occur along ridgetops, roads, and other natural and manmade features that can serve as strategic anchor points for larger prescribed burns and to create areas of low fuel that can be used to manage wildfires. Wildfires would most often be suppressed to reduce the threat to communities and assets unless specific conditions allowed for safe use of wildfire to meet resource objectives.
- **Wildfire restoration zone.** This zone encompasses areas of low to moderate risk for communities, structures, and other resource values. Wildfires pose a mix of positive and negative effects to resources and isolated assets. Strategically-placed fuels reduction (thinning or prescribed fire) treatments would allow for larger prescribed burns and ultimately restoration of fire as a component of the ecosystem. Many wildfires in this zone would be managed to meet resource objectives.
- **Wildfire maintenance zone**. This zone is typically high elevation, wilderness, and remote areas where wildfire poses a very low risk to communities and assets, and mostly positive effects to resources. Prescribed burning would be used to increase the opportunity to manage wildfires and restore fire-adapted ecosystems.

The forest plan desired conditions and resource objectives would differ across fire management zones and would emphasize project designs to strategically reduce fuels and increase opportunities to manage unplanned wildfire starts. Smoke impacts from prescribed fire and managed wildfire would continue to be evaluated.

Ecological Integrity. Alternative B emphasizes restoration of vegetation and watersheds based on descriptive vegetation-based desired conditions that characterize resilient and sustainable vegetation conditions by major vegetation and habitat types. Like the other action alternatives that follow, it replaces plan direction focused on Forest Service sensitive species with plan direction for at-risk species, which include federally-listed species and species of conservation concern. Species of conservation concern are native, known to occur in the plan area, and have a substantial concern for their capability to persist over the long term in the plan area.

This alternative proposes to increase restoration treatments to move terrestrial habitat toward the desired conditions at a moderate pace. There is an increased emphasis on restoring fire as an ecosystem process in fire-adapted ecosystems with frequent fire-return. Additional desired conditions for vegetation provides for increased habitat heterogeneity for multiple species at both the fine and landscape scales. Specific desired conditions and guidelines for individual vegetation types, old forest, and sagebrush provide ecological integrity of habitat for multiple species. Plan direction provides protection for California spotted owl, great gray owl, Pacific fisher, Sierra marten, Sierra Nevada bighorn sheep and Nelson desert bighorn sheep, willow flycatcher, and Yosemite toad.

In aquatic and riparian ecosystems, prescribed burn ignitions and, where necessary, mechanical and hand treatments would occur to restore ecological integrity and improve the resilience of riparian ecosystems to fire, drought, and climate change. One additional critical aquatic refuge is added to the 17 in alternative A.

Sustainable Recreation and Designated Areas. Alternative B integrates consideration of the recreation opportunity spectrum and desired scenic integrity objectives with restoration desired conditions and design criteria. This alternative would establish four management areas totaling 37,039 acres (South Sierra; Piper Mountain Addition; White Mountains East; and White Mountains West), recommended for inclusion in the National Wilderness Preservation System. It defines the management area for the Pacific Crest National Scenic Trail to be up to one-half mile from the centerline of the trail. Like the other action alternatives that follow, it recognizes the importance of partnerships and encourages more partnerships to support ecological restoration.

Alternative B-modified (Preferred Alternative)

Alternative B-modified was developed to address public comments and improve upon the draft forest plan. Alternative B-modified includes the following proposed changes from alternative B, which are organized by revision topics, as follows:

Wildland Fire Management. In alternative B-modified, we corrected and adjusted variables in our modeling, such as the low elevation sagebrush because fire can exacerbate spread of invasive cheatgrass in the sagebrush ecosystem. This resulted in some adjustments to the mapping and acreage of the strategic fire management zone boundaries and classifications. We clarified that the boundaries of the fire zones are determined by conditions on the ground and may be updated administratively to reflect new developments or disturbances. The current updated maps are provided in the final environmental impact statement.

Ecological Integrity. Alternative B-modified identifies how the water, watershed, riparian conservation area, and conservation watershed direction are integrated and how the use of these components, along with restoration efforts and monitoring provide an overall aquatic and riparian strategy. These elements work together to achieve desired conditions across the plan area.

We replaced 17 small critical aquatic refuges with four larger conservation watersheds. Conservation watersheds are a subset of watersheds that are prioritized to provide for persistence of both plant and animal at-risk species as well as other beneficial uses of water.

We also updated plan components to better provide ecological conditions for the bi-state greater sage-grouse population.

Sustainable Recreation and Designated Areas. This alternative modified the framework for recreation management based on public comments suggesting that more clear direction be developed.

The concept of recreation “places” from alternatives B, C, and D is modified to three management areas that integrate with the recreation opportunity spectrum settings and provide the overall management direction for activities and uses:

- **Destination Recreation Area** is the most developed of the three zones, with high-density visitor use and a variety of recreation opportunities. These areas emphasize facilities and are primarily in the roaded natural, semi-primitive motorized, and semi-primitive nonmotorized recreation opportunity spectrum classes.
- **General Recreation Area** encompasses the multiple-use, working landscape which may be modified further to meet social, economic, and ecological objectives. The recreation opportunity spectrum classes are primarily rural with a mix of semi-primitive motorized and semi-primitive nonmotorized classes.

- **Challenging Backroad Recreation Area is** the zone of undeveloped, natural landscapes with low visitor use, few amenities, and limited management and Forest Service presence. These areas are suited for challenging, dispersed recreation and are in the semi-primitive motorized, semi-primitive nonmotorized, and roaded natural recreation opportunity spectrum classes.

Alternative B-modified is mostly the same as alternative B in terms of recommended wilderness, and wild and scenic river eligibility, although we updated supporting information between the draft and final environmental impact statements.

Alternative C

Alternative C includes proposed changes in management to respond to public issues, emphasizing wilderness values and a passive management approach to restore fire as an ecosystem process, primarily using prescribed fire and natural disturbance processes (such as managing wildfire for resource benefit) to achieve landscape-level desired conditions.

Wildland Fire Management. Fire management in this alternative combines elements of current management (distance-based zones described in alternative A) with the strategic fire management zones based on fire risk assessment

- The distance-based defense zone around communities would remain in place.
- The maintenance zone is identified using the same risk-based methodology used to create the wildfire maintenance zones as alternative B-modified and D.
- The general wildfire zone consists of the restoration zone, general wildfire protection zones, and portions of the community wildfire protection zone.
- The updated modeling as described in alternative B-modified is applied.

Alternative C would include the same guidance for designing projects to minimize the impacts of smoke on communities as alternatives B and B-modified.

Ecological Integrity. Alternative C is designed to manage the forest landscape to minimize short-term impacts on habitats from management activities while accepting the risk of large high-intensity wildfires that could affect mature and old forests. Alternative C focuses vegetation and fuel reduction treatments within the wildland-urban intermix defense zone and seeks to restore vegetation desired conditions in the larger landscape with limited, strategic use of mechanical thinning and a heavier emphasis on the use of prescribed fire and wildfire managed primarily for resource objectives where safe and consistent with desired conditions. Alternative C would not use the focused landscapes approach described in alternatives B and D.

Alternative C emphasizes restoration of sagebrush habitats and retaining large trees and other habitat components such as high densities of snags and downed logs. It would continue to provide protection for riparian conservation areas and would add eight critical aquatic refuges.

This alternative emphasizes the role of natural processes in restoration, primarily through prescribed fire and natural disturbance processes (such as managing wildfire for resource benefit) to achieve landscape-level desired conditions. Mechanical treatments (such as mechanical thinning, timber harvest, and fuels reduction) would be used to move the Inyo National Forest toward social, economic and ecological sustainability, but there would be fewer suitable acres for timber production than in other alternatives. In general, mechanical treatment methods would be used less than in the other alternatives and would be limited in riparian conservation areas.

This alternative includes the same direction for the bi-state greater sage-grouse as alternative B but with slightly more habitat maintained, improved, or restored. Direction for the great gray owl and Sierra Nevada bighorn sheep and Nelson desert bighorn sheep would be same as alternative B-modified. Species-specific plan direction for Yosemite toad would be the same as alternative A, and direction for willow flycatcher would focus on maintaining and restoring nesting habitat in the Mono Lake basin.

Sustainable Recreation. In alternative C, the range of recreation opportunity spectrum classes would shift with larger areas allocated to primitive and semi-primitive nonmotorized recreation settings and less area allocated to motorized recreation settings, in large part due to 24 additional areas of recommended wilderness that would comprise an additional 325,359 acres on the Inyo National Forest. The Pacific Crest National Scenic Trail corridor would be up to one-half mile from the centerline of the trail as in alternatives B and B-modified, but expands to include areas within iconic viewsheds along the trail up to four miles from the centerline of the trail.

Alternative D

Alternative D includes proposed changes in management to respond to the issues identified during scoping. Alternative D includes proposed changes in management that would increase the pace and scale of treatments to actively improve ecological resilience to wildfire and reduce smoke from future wildfires. It is designed to reduce forest density and increase forest resilience to drought, improve the sustainability of recreation, and increase the amount of forest products produced to better contribute to economic and social well-being.

Wildland Fire Management. Alternative D uses the same four risk-based wildfire management zones as in alternatives B and B-modified, and updated modeling as in alternative B-modified. It emphasizes strategic use of mechanical treatments and increases strategic treatments along roads and ridgelines to support larger landscape prescribed burning and to increase the opportunity to use these treated areas to manage wildfires to meet resource objectives. Pre-treating areas prior to prescribed burning would reduce the potential for smoke impacts to communities from uncharacteristic wildfire.

Ecological Integrity. Alternative D applies similar direction as alternatives B and B-modified, but doubles the pace and scale of restoration to have greater likelihood of reducing the impact of future high-intensity wildfires. There would be more emphasis on providing variability within tree patches during treatments to increase stand heterogeneity and increase resilience to drought. While doubling pace and scale, this alternative would include plan components to provide for complex early seral habitat and at-risk species while accepting some short-term risks to species to manage more areas for vegetation desired conditions over the long term. Species-specific plan direction is added for the bi-state greater sage-grouse, with acres habitat maintained, improved, or restored increased the same as alternative C. Direction for California spotted owl, great gray owl, Sierra Nevada bighorn sheep, and Nelson desert bighorn sheep would be the same as alternative B-modified.

Yosemite toads would be protected using grazing management strategies that consider meadow habitat conditions, known and probable occurrences, and designated critical habitat. These strategies would range from no grazing to the current forestwide grazing standards in the existing forest plan.

The aquatic management strategy and direction for aquatic and riparian conservation areas and critical aquatic refuges would be the same as in alternative B.

Sustainable Recreation. Alternative D does not make any additional preliminary administrative recommendations for wilderness. It defines the management area corridor for the Pacific Crest National Scenic Trail as one-quarter mile from the centerline. It integrates consideration of recreation opportunity, scenic character and scenic character stability into restoration desired conditions and design criteria as in alternative B.

Affected Environment and Environmental Consequences

This section includes summary conclusions of expected environmental outcomes in response to changes in management under the different alternatives. A comparison of how each alternative is expected to affect trends in key environmental indicators is also summarized in the "summary of consequences" table below and is the focus of chapter 3 of the final environmental impact statement.

Topic 1: Wildland Fire Management

The Inyo National Forest is applying a zoned risk management approach to wildland fire management in alternatives B, B-modified, and D that gives the national forest staff and fire managers more latitude to proactively plan and restore the landscape by managing wildfire to meet resource objectives. The risk assessment includes contemporary geospatial information that considers highly valued resources and assets. These alternatives favor more mechanical treatment in sagebrush ecosystems where fire is known to lead to expansion of cheatgrass, an invasive species that degrades habitat quality. These alternatives would facilitate higher rates of restoration in the places with high risk and highly valued resources and assets compared to alternatives A and C. Air quality would be affected under all alternatives, with increases in smoke and emissions resulting from fires of all sizes, but reduced fuel loading from the increased restoration activities under the action alternatives could result in reductions in emissions over the long term. Fire management under alternatives B and B-modified include a more balanced mix of mechanical treatments, prescribed fire, and wildfire managed for resource objectives than alternative D, which emphasizes more mechanical treatments in forested areas.

Topic 2: Ecological Integrity

Restoring forest health is a key focus of the forest plan, and ecological integrity of terrestrial systems is closely tied to the levels of restoration that would be achieved under the alternatives. All plan action alternatives (B, B-modified, C, and D) increase the rates of restoration, with alternative D likely to lead to the highest rates. However, because 46 percent of the Inyo National Forest is designated wilderness, cost, feasibility, and short-term ecological impacts to wildlife and aquatic systems associated with mechanical treatments may be an unacceptable trade-off. While alternative C facilitates more extensive use of fire (except in sagebrush), where there is no mechanical pre-treatment, fire may not yield all the desired resource outcomes in the right places. Alternatives B and B-modified present a more balanced approach to restoration, as noted above, and are believed to contribute to long-term resilience of forests by restoring a more heterogeneous structure, addressing the negative impacts of invasive species, and providing better connectivity in the short and long terms.

In aquatic and riparian ecosystems, alternative B-modified presents the most integrated approach to achieve resource benefits at both landscape and local scales. While direction for riparian conservation areas is fairly consistent across all action alternatives, the addition of conservation watersheds in alternative B-modified responds more effectively to maintaining and restoring resilience in the face of large-scale disturbances and unpredictable events that are currently

occurring. In alternative B-modified, conservation watersheds replace critical aquatic refuges, which continue to be present in the other alternatives. The aquatic strategic approach in alternative B-modified includes plan components that range from those maintaining and restoring landscape connectivity to those that are species-specific. The larger landscape approach that addresses connectivity is expected to be more effective at restoring resilience. All action alternatives continue a trajectory of improvements in health of aquatic and riparian ecosystems, including meadows and fens.

All alternatives contribute to providing ecological conditions to support wildlife, fish and plants to varying degrees without major differences for federally listed species. For species dependent on sagebrush, alternative B-modified results in the most improvements to those habitats because of fire management and restoration practices. There are additional plan components focused on aquatic and riparian-dependent species in alternative B-modified that provide for species-specific requirements.

Topic 3: Sustainable Recreation and Designated Areas

There is a need to adapt to and accommodate the increasing demand for recreation on the Inyo National Forest, balancing it with protection of natural resources. Alternative B-modified responds to public input for more clear direction to manage recreation uses and activities into the future. The three sustainable recreation zones serve as a framework that best accommodates current and potential future uses and opportunities by addressing visitor uses with a management area approach that identifies areas of highly concentrated and diverse activities that will require more intensive management to areas where more development may occur if needed, to areas where a low density of use and limited infrastructure will be maintained. Alternatives B, C and D rely completely on the recreation opportunity spectrum to manage visitor use, and were therefore not as adaptive to meeting future desires for recreational use.

Preferred Alternative

Based on public input, our analysis of the alternatives, and what we think responds best to the issues, we have chosen alternative B-modified as the preferred alternative for the Inyo National Forest's revised land and resource management plan. Alternative B-modified best meets the purpose and need, is broadly supported by state and local governments, tribes, other Federal agencies, local communities, and other stakeholders, and represents a balanced approach to meeting resource goals, and achieving ecological, social and economic sustainability. The following tables provide a summary of how the alternatives compare by acreage in management areas (table S-1), how each addresses the revision topics (table S-2), and the predicted environmental effects of each alternative (table S-3).

Table S-1. Comparison of management area acreage in each alternative

Management Area	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Wildland-urban Intermix Defense Zone (acres)	21,940	Not applicable	Not applicable	21,940	Not applicable
Wildland-urban Intermix Threat Zone (acres)	191,616	Not applicable	Not applicable	Not applicable	Not applicable
Community Wildfire Protection Zone (acres)	Not applicable	170,572	116,146	Not applicable	116,146

Management Area	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
General Wildfire Protection Zone (acres)	Not applicable	371,596	559,513	Not applicable	559,513
Wildfire Restoration Zone (acres)	Not applicable	568,685	533,233	Not applicable	533,233
General Wildfire Zone (acres)	Not applicable	Not applicable	Not applicable	1,155,557	Not applicable
Wildfire Maintenance Zone (acres)	Not applicable	872,106	774,070	805,462	774,070
General Forest “Other”	1,769406	Not applicable	Not applicable	Not applicable	Not applicable
Designated Wilderness (acres)	967,039	967,039	967,039	967,039	967,039
New Recommended Wilderness (acres)	0	37,029	37,029	325,359	0
Designated Wild and Scenic Rivers (miles)	90	90	90	90	90
Existing Recommended Wild and Scenic Rivers (miles)	16.5	16.5	16.5	16.5	16.5
Eligible Wild and Scenic Rivers (miles)	128.3	241.2	241.2	241.2	241.2
Pacific Crest National Scenic Trail (miles)	86	86	86	86	86
Pacific Crest National Scenic Trail Corridor (acres)	116	39,973	39,973	130,350	22,053
Critical Aquatic Refuges (acres)	170,600	191,567	0	322,518	191,567
Conservation Watersheds	0	0	387,678	0	0
Challenging Backroad Area (Low Use)	0	0	543,938	0	0
General Forest Recreation Area (Mixed/Moderate Use)	0	0	327,622	0	0
Destination Recreation Area (High Use)	0	0	45,585	0	0

Table S-2. Comparison of how each alternative addresses the revision topics

Revision Topic	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Fire Management	Management focuses hazardous fuel reduction treatment in two distance-based areas surrounding the wildland-urban intermix defense zone and wildland-urban intermix threat zone. Naturally ignited wildfires are evaluated on a case-by-case basis to determine if they can be managed to meet resource objectives.	Replaces alternative A zones with four management areas based on a fire risk assessment consistent with the National Cohesive Fire Strategy: community wildfire protection zone, general wildfire protection zone, wildfire restoration zone, and wildfire maintenance zone. Strong emphasis on managing naturally ignited wildfires in the wildfire maintenance zone and strongly encouraged in wildfire restoration zone where some mechanical and burning treatments may be needed first.	Same as alternative B except modelling variables for wildland fire risk were updated. Emphasis on managing naturally ignited wildfires to achieve resource objectives for resource benefits same as alternative B.	Fire management zones consist of a combination of alternative A distance-based wildland-urban interface defense zone and the alternative B risk-based wildfire maintenance zone. The remainder of the Inyo would be called the general wildfire zone. Updated fire risk assessment modelling was applied as in alternative B. Emphasis on managing naturally ignited wildfires in the wildfire maintenance zones same as alternative B. In the general wildfire zone, naturally ignited wildfires strongly encouraged but prescribed burning may be needed first.	Fire management zones and approach to managing naturally ignited wildfires same as alternative B. Updated fire risk assessment modelling was applied as in alternative B.

Revision Topic	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Ecological Integrity – Vegetation management	Management emphasis on short-term retention of mature forest habitat for old forest associated wildlife species. Vegetation and fuels management treatments prioritized in the wildland-urban intermix and elsewhere in a roughly geometric pattern of strategically placed area treatments. In the wildland-urban interface defense zone (the area closest to structures and communities), there are fewer restrictions on the intensity of thinning. There is a forestwide standard and guideline limiting tree removal to less than 30 inches in diameter.	Management emphasis on restoration of vegetation desired conditions based on natural range of variation and habitat elements for at-risk species. Treatments continue to reduce fire risk near communities. Strategically located mechanical and prescribed burning treatments along roads and ridges are designed to support larger landscape-scale prescribed burning and greater opportunity to manage wildfires to meet resource objectives. Forestwide direction for limiting removal of trees larger than 30 inches in diameter applies to the wildfire restoration zone and wildfire maintenance zone. Elsewhere, desired conditions for number of large trees by vegetation type guides retention levels.	Similar to alternative B except 133,490 acres (7% of total acres in the planning area) will be reclassified from Maintenance or Restoration Fire Management Zone to the General Wildfire Protection Zone. Nearly all these acres are located in lower elevations of the sagebrush vegetation type, where the primary restoration approaches will rely on methods other than wildfires managed to achieve resource objectives. Some adjustments also made to account for infrastructure. Forestwide direction for limiting removal of trees larger than 30 inches in diameter clarified to allow some removal for ecological restoration and to benefit old forest conditions. Use of fire to meet desired conditions provides direction for managing long-term functionality of aquatic, riparian, and terrestrial systems in conservation watersheds and also provides flexibility with the intent to increase the pace and scale of restoration in riparian areas, meadows, and streams.	Mechanical treatments are focused on the wildland-urban interface defense zone, with limited mechanical treatment elsewhere. There is an emphasis on prescribed burning as the primary restoration method and an emphasis on managing wildfires to meet resource objectives where feasible. Forestwide direction for limiting removal of trees larger than 30 inches is same as alternative A except in the portion of the Inyo with California spotted owl habitat where smaller diameter limits exist in suitable habitats.	Management emphasis is similar to alternative B but there is more focus on increasing the area treated to improve the long-term sustainability and resilience of forests and watersheds. Desired conditions for number of large trees by vegetation type guides retention levels forestwide. There are no diameter limits for removing large trees.

Revision Topic	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Ecological Integrity- Aquatic and riparian resources (critical aquatic refuges, conservation watersheds and riparian conservation areas)	Identifies riparian conservation areas, a buffer area around streams, rivers, lakes, meadows, bogs, and other wetland types. The riparian conservation area is wider for perennial streams than for intermittent and ephemeral streams and can be adjusted smaller or larger based upon site conditions. Prescriptive standards and guidelines avoid, minimize or mitigate activities and actions that could adversely affect riparian vegetation or aquatic conditions. Identifies a set of 17 critical aquatic refuges focused on areas with threatened and endangered species or areas of other species with population concerns. The direction that applies to riparian conservation areas applies to the critical aquatic refuges.	Direction is functionally similar to that contained in alternative A, except for: a) streamlining and consolidating direction; b) removal of direction that repeats laws, regulations, or policies; c) changing "riparian conservation objectives" from Sierra Nevada Forest Plan Amendment to other plan components for consistency with 2012 Planning Rule requirements; and d) modifying the direction to allow prescribed burn ignitions and, where necessary, mechanical and hand treatments to restore ecological integrity. One additional critical aquatic refuge would be added to the 17 in alternative A.	Similar direction for riparian conservation areas as alternative B with some clarification, refinements, and reorganization. Switches approach of managing 17 small scattered critical aquatic refuges that provide for aquatic species with approach managing 4 larger conservation watersheds. Conservation watersheds are a subset of watersheds that are prioritized to provide for persistence of both plant and animal at-risk species (biodiversity focus) as well as other beneficial uses of water. Because of their scale, they provide cumulative beneficial effects on connectivity, integrity, and refugia for at-risk species in the face of large-scale unpredictable events.	Direction for riparian conservation area and critical aquatic refuges would be the same as alternative B. Adds 8 new critical aquatic refuges to the 17 in alternative A.	Alternative D includes the same direction for riparian conservation areas and critical aquatic refuges as alternative B.

Revision Topic	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Ecological integrity – Wildlife	Plan direction for management of federally listed species and Regional Forester designated sensitive species. Limited forest plan direction for management of sagebrush and sage-grouse habitat. Management guided by agreements to implement direction in interagency action plans. Direction for forest management primarily focused on the short-term retention of dense canopy cover and restricts removal of large trees to provide mature forest habitat for species like the California spotted owl and Sierra marten.	The 2012 Planning Rule manages for at-risk species, which are federally listed species and species of conservation concern. Species of conservation concern are designated by the Regional Forester and replace Regional Forester sensitive species. Adds specific forest plan direction focused on restoration of sage-grouse habitat The Draft EIS alternative mistakenly dropped plan direction for California spotted owl and great gray owl. The Final EIS corrects this error and applies the same plan direction developed for the Sequoia and Sierra National Forests in the Draft EIS for alternative B but limits it to the same spatial area on the Inyo National Forest as in alternative B-modified.	The at-risk species approach is the same as alternative B. Modifies some of the strategic fire management zones from alternative B to reclassify areas dominated by sagebrush to the general wildfire protection zone to limit impact of fire on sage-grouse habitat. (Fire suppression of most fires in sagebrush helps prevent cheatgrass invasion.) Refines the plan direction for California spotted owl from alternative B to reflect the limited amount of suitable habitat adjacent to the Sierra and Sequoia National Forests. Modifies plan direction for the great gray owl from alternative B to drop direction for pre-defined protected activity centers to allow establishment of necessary protective measures based upon other forestwide direction for at-risk species.	The at-risk species approach is the same as alternative B. Increased restoration of sage-grouse habitat similar to alternative B. Retains emphasis on short-term habitat protection for California spotted owl and Sierra marten in forested habitats by applying the same direction developed for the Sequoia and Sierra National Forests for alternative C to the same limited area as alternative B.	Same as alternative B.
Recommended Wilderness	No additional recommended wilderness areas	Makes a preliminary administrative recommendation to include 4 additional areas in the National Wilderness Preservation System (South Sierra; Piper Mountain Addition; White Mountains East; and White Mountains West); 37,029 acres.	Same as alternative B	Alternative C would make a preliminary administrative recommendation to include 24 additional areas totaling 325,352 acres in the National Wilderness Preservation System.	No additional recommended wilderness areas

Revision Topic	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Wild and Scenic River Eligibility	Includes current inventory of 128.3 miles of wild and scenic rivers.	The updated miles determined to be eligible for inclusion in the National Wild and Scenic Rivers System is approximately 241.2 miles.	Same as alternative B.	Same as alternative B.	Same as alternative B.
Pacific Crest Trail	The current forest plan manages the Pacific Crest Trail according to direction provided by a 1982 Comprehensive Management Plan and direction is focused on the trail tread and immediate surroundings Width of management area is 6 feet.	Creates a management area allocation for the Pacific Crest Trail by defining a corridor of the visual foreground landscape zone as defined by the Scenery Management System, (up to one-half mile from the centerline on both sides of the trail where visibility is not obscured by terrain). Width of management area is up to one-half mile of each side of centerline.	Creates a management area and sets direction the same as in alternative B.	Creates a management area allocation for the Pacific Crest Trail by defining a corridor that includes the same visible foreground (up to one-half mile of centerline of the trail where visibility is not obscured by terrain) as alternative B and also includes lands inventoried as "Scenic Attractiveness A" in the Scenery Management System within the trail's viewshed. Width of management area up to 4 miles each side of centerline of trail.	Creates a management area allocation for the Pacific Crest Trail by defining a corridor one-quarter mile from the centerline of the trail. The plan direction assigned to the corridor would be the same as alternative B. Width of management area one-quarter mile each side of centerline.
Scenery Management	Scenic character is managed using the 1986 Visual Management System.	Identifies scenic integrity objectives for the plan areas using the Scenery Management System.	Same as alternative B	Same as alternative B	Same as alternative B

Revision Topic	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Sustainable Recreation and Recreation-based Management Areas	The emphasis is on improving recreation opportunities by focusing on the maintenance, development, adaptation, or alteration of dispersed and developed recreation sites consistent with the recreation opportunity spectrum class of the area.	Recreation opportunity spectrum classes are updated to reflect existing management and to consider recommended wilderness. The management approach for recreation settings is integrated with ecological restoration approaches. A concept of "places" is used to guide management efforts to sustain scenery, settings and opportunities.	The concept of recreation places in alternatives B, C, and D is replaced by a zone concept and integrates with the settings described by the recreation opportunity spectrum. The three zones span a continuum from areas of more concentrated recreation to areas of remote, less-concentrated, low density recreation.	Similar to alternative B except the range of recreation opportunity spectrum classes would shift based on recommended wilderness areas.	Similar to alternative B except the range of recreation opportunity spectrum classes would shift with fewer areas allocated to primitive and semi-primitive nonmotorized recreation settings and more area allocated to motorized recreation settings due to recommended wilderness.
Production Livestock Grazing	Grazing direction includes 1988 Forest Plan and 1995 Forest Plan Amendment 6 – Forestwide Range Utilization Standards. Amendment 6 references some outdated methods and includes process and protocols for determining allowable grazing utilization standards as part of forest plan direction.	Several updates to existing management direction as compared to alternative A. Amendment 6 (1995) removed from forest plan. Process and protocols would be located in a technical guide residing outside the plan called "Forest Supplement to Rangeland Analysis and Planning Guide." [2012 planning rule guidance suggests methodologies for assessment processes not be included in plan content.	Same as alternative B	Same as alternative B	Same as alternative B
Timber Suitability	85,025 acres suitable for timber production	72,234 acres suitable for timber production	Same as alternative B	70,608 acres suitable for timber production	Same as alternative B

Table S-3. Summary of consequences for the major topics addressed in this final environmental impact statement

Resource	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Agents of Change Combined effects of climate, fire, insects, and pathogens	Relatively low to moderate restoration treatment rates will somewhat reduce the combined impacts of climate change, fire, insects, and pathogens, but only in a limited number of treated areas within the larger landscape. Conservation of moderate to high-density canopy cover in late seral forest habitat would result in low resilience to high-intensity fires, drought and temperature increases.	Moderate restoration treatment rates will reduce the combined impacts of climate change, fire, insects, and pathogens in more areas than in alternative A. Treated forest, sagebrush, and pinyon juniper ecosystems will have enhanced capacity to resist the interactive effects of multiple stressors. This alternative emphasizes climate adaptation strategies across larger landscapes.	Similar to alternative B but with a marginally lower combined impact of climate change, fire, insects, and pathogens due to slightly higher restoration treatment rates.	Similar to alternative A, but with greater resilience to combined stressors resulting from higher fire restoration (prescribed fire, wildfire managed for resource objectives) treatment rates.	Similar to alternative B but has greater amount of restoration treatment across the landscape, resulting in the lowest combined impacts of climate change, fire, insects, and pathogens. Treated forest, sagebrush, and pinyon juniper ecosystems will have a higher capacity to resist the interactive effects of multiple stressors.
Wildland Fire Management	Does not proactively analyze fire risk with a spatial risk assessment, which limits the restoration and maintenance of landscapes through managing wildfire to meet resource objectives, and the safe and effective fire responses due to the uncertainty of the location of assets and resource at risk. This results in limits to the restoration and maintenance of landscapes through the use of wildfire, both with strategically located prescribed burning and wildfires managed to meet resource objectives.	Risk assessment provides information that reduces uncertainties and allows forest and fire managers to have more latitude to proactively plan and restore the landscape by managing wildfire to meet resource objectives and using prescribed fire. Applies risk management explicitly and has the greatest amount of ecological restoration that reduces risk and provides resource benefits. This greater amount of projects and the enhancement of strategic fire management features would provide the greatest likelihood of implementing large prescribed fires or managing wildfires to meet resource objectives.	Same as alternative B, but there is a reduced amount of low elevation sagebrush in the Wildfire Restoration Zone. Instead, most low elevation sagebrush is changed to the General Wildfire Protection Zone. This will reduce the negative impacts of wildfires on sagebrush where expansion of cheatgrass is a risk.	This alternative uses a more simplified 3-zone approach that will make it more difficult and uncertain to make fire management decisions that minimize the negative impacts of wildfires on high-valued resources and assets. This alternative emphasizes the use of prescribed fire and limits mechanical treatment of medium and large conifers for vegetation management. This could limit the amount of projects and the enhancement of strategic fire management features to meet resource objectives.	Same as alternative B-modified.

Resource	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Air Quality	Increases in emissions and other cumulative effects would make long-term attainment of emissions goals unlikely under alternative A.	Restoration activities would increase emissions and affect air quality in the short term, but the degree of increase is dependent on the amount of treatment. In the long-term, restoration activities would reduce emissions from wildfires.	Same as alternative B	Same as alternative B except emissions, given the focus on managed and prescribed fire for restoration, would have the potential for higher expected short-term emissions. To the extent that prescribed burning and wildfires managed to meet resource objectives occur, a reduction in wildfire smoke would make long-term attainment of visibility goals more likely than under alternative A but less likely than under alternatives B-modified, B and D.	Same as alternative B except, given the highest pace and scale of restoration activity, in the long-term alternative D has the greatest potential to reduce emissions from wildfires. The restoration treatments would result in the greatest reduction in wildfire emissions. This alternative has the greatest likelihood of long-term attainment of visibility.
Terrestrial Ecosystems Sierra Nevada zones and habitats	Fewer opportunities for restoration including use of wildfire to achieve resource objectives results in slower return to desired conditions than in the plan revision alternatives.	Somewhat higher restoration rates across larger landscapes primarily through increased use of wildfire to meet resource objectives. Results in better adaptive capacity, but large high-intensity fire is likely to continue. There will be moderated effects in treated landscapes.	Same as alternative B	Increased emphasis on prescribed fire and wildfire managed for resource objectives, which may result in increased restoration. Because of lower level of mechanical treatment in these habitat types, there may be fewer opportunities to manage wildfire for resource objectives.	Similar to alternative B except with greater rates of restoration toward desired conditions in vegetation structure and composition.

Resource	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Terrestrial Ecosystems Great Basin zones and habitats	Lower rates of restoration than the plan revision alternatives and slower to achieve desired conditions across these habitat types.	Increased rates of treatment compared to the current plan would move these habitat types toward desired conditions across the landscape. Main effects would be to achieve less dense and more heterogeneous structure, and reduce nonnative invasive plants. These changes would increase the resilience to drought, insects and pathogens, climate change, and fire.	Same as alternative B	There would be greater mechanical restoration treatment rates in sagebrush than in alternative B and B-modified. Great Basin habitats other than sagebrush would only have slightly more restoration than in the current plan and would be slower to reach desired conditions.	Given the higher pace and scale of restoration, this alternative would be expected to move the greatest amount of sagebrush shrublands toward the desired conditions, especially in areas of sage-grouse habitat. Other Great Basin habitats, like pinyon-juniper, would progress toward desired conditions at a slightly higher rate than under alternative B.
Terrestrial Ecosystems Landscape connectivity	Provides low to moderate connectivity for forest-associated and other wildlife species under both short- and long-term horizons. Alternative A promotes lower restoration treatment rates and lacks some management approaches that are specifically focused on habitat linkage and dispersal corridor areas.	Provides for moderate levels of short- and long-term habitat connectivity, especially for forest-associated species such as marten. Includes a greater number of management approaches focused on maintaining habitat linkages than alternative A.	Same as alternative B	Provides the greatest short-term connectivity but at the cost of higher exposure or sensitivity to uncharacteristically severe fire, climate change, and other stressors that reduce long-term habitat connectivity.	Supports somewhat greater long-term habitat connectivity than alternative B, but at the cost of significantly reduced short-term habitat connectivity resulting from elevated mechanical and prescribed fire treatment rates in the next 10 to 20 years.

Resource	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Terrestrial Ecosystems Old forest	Same as alternative B except there would be slightly lower levels of benefit from restoration because treatments would be less intense and less extensive.	There would be slightly more old forests restored to desired tree densities, heterogeneity, tree canopy cover, fire regime integrity, and fire as an ecosystem process. This would restore old forests toward conditions reflecting the natural range of variation. In treated areas, large, old trees would have substantially increased resilience to moisture stress, drought, insects and pathogens, ozone, and large, high-intensity fires. There would also be reduced vulnerability to future drought, insect, and pathogen-related large tree mortality because the greatest intensity of forest thinning across large areas and greater levels of fire restoration would occur.	Same as alternative B	Same as alternative B except there would be slightly lower levels of benefit from restoration because treatments would be less intense and less extensive.	Same as alternative B except there would be somewhat higher restoration treatment rates and associated expected benefits to old forest structure and resilience.
Terrestrial Ecosystems Complex early seral forest	There is a low to moderate increase in complex early seral forest in alternative A. The proportion of complex early seral forest will be slightly higher than the natural range of variation.	There is a moderate increase in complex early seral forest that is greater than alternative A but less than alternative C. Specific plan components in alternative B provide for greater protection of complex early seral forest. The proportion of complex early seral forest will be more similar to natural range of variation than alternative A.	Same as alternative B	The increase in complex early seral forest would be the highest in alternative C. The proportion of complex early seral forest may be within or exceed the natural range of variation in some forest landscapes.	Same as alternative B

Resource	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Aquatic and Riparian Ecosystems	Management direction does not explicitly address climate change. Riparian conservation areas provide ecological connectivity across larger landscapes. Proposes the fewest number of meadows maintained, enhanced or improved and has more restrictive constraints on use of restoration tools. There would continue to be limited restoration of riparian vegetation and limited ability to adequately reduce fuel volumes in riparian conservation areas. As a result, aquatic habitat under this alternative would be at a greater risk to degradation from untreated stressors and large-scale disturbances.	This alternative addresses ecological connectivity, species diversity and resilience to climate change more explicitly and includes direction that will help reduce fuel loads, restore fire, and manage riparian vegetation species composition, structure, and function, while reducing soil disturbance. Direction emphasizes desired conditions and management of riparian conservation areas to provide flexibility of management using a variety of tools. More meadows would be maintained, enhanced or improved than in alternative A. Restoration activities create a fire regime more aligned with historic patterns, thus improving riparian area resilience to fire.	Same as alternative B, but incorporates a larger landscape approach by using conservation watersheds. It replaces 17 critical aquatic refuges (typically 10,000-40,000 acres each) with four conservation watersheds (typically larger than 80,000 acres) in areas prioritized for conservation of at-risk species, their habitats, and headwaters providing high-quality water for beneficial uses. Complementary approach among riparian conservation areas, conservation watersheds, and forestwide direction for at-risk species and watersheds provides protections and allows latitude and flexibility to increase the pace and scale of restoration in riparian areas, meadows, and streams.	Alternative C adds 8 critical aquatic refuges. It would have fewer disturbances to the riparian conservation areas than alternatives B and D with more restrictions on mechanical treatments overall. Maintains, enhances or improves more meadows than alternative A and would move vegetation toward desired conditions and reduce the ingrowth of conifers.	Similar to alternative B except that the high number of treatments proposed translates into a higher risk of short-term disturbance to aquatic species and temporary disturbance to aquatic habitat conditions from mechanical and prescribed fire treatment actions until the habitat recovers.
Water Quality and Quantity, and Watershed Condition Water quality	No change in current management direction and therefore continued trends in water quality are expected.	Emphasizes a long-term approach through increased pace and scale of ecological restoration across the landscape and reduces the overall risk of high-intensity wildfire. Short-term impacts would be similar to alternative A because riparian conservation areas would be carried forward and best management practices would minimize these impacts.	Same as alternative B.	Similar to alternative B in effects except alternative C includes more recommended wilderness, and therefore would use less mechanical pre-treatments. As a result, restoration activities may not be applied to the extent needed, which could lower long-term benefits to water quality compared to other action alternatives.	Same as alternative B except that alternative D best reduces the overall risk of high-intensity wildfire over the long-term, thus potentially providing the most long-term benefits.

Resource	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Water Quality and Quantity, and Watershed Condition Water quantity	Would likely maintain shallow groundwater at current levels if not for the changing climate trending toward warmer and drier conditions in the Sierra Nevada. Even if precipitation remains the same, more rain and less snow would reduce recharge and storage and increase runoff. Combined with greater evapotranspiration, the precipitation provides less soil moisture for healthy forest vegetation, soil infiltration, and recharging the shallow groundwater.	Would reduce evapotranspiration at a landscape scale and would likely increase the opportunities for infiltration across many watersheds.	Same as alternative B	Same as alternative A	Same as alternative B
Water Quality and Quantity, and Watershed Condition Watershed conditions	Would take longer to restore the fire regime and forest health at a landscape level.	Alternative B would move the national forest towards desired conditions at a faster pace than alternatives A and C through restoration of fire regimes and improving forest health at a landscape level. Long-term water quality and quantity are closely linked to these indicators.	Similar to alternative B. In addition, conservation watersheds represent a long-term prioritization for maintenance and restoration of watersheds and particularly focus on aquatic resources and water quality. This alternative will maintain and in some cases improve the functional rating of some Watershed Condition Framework indicators such as but not limited to, fire regime, wildfire, water quality, and riparian/aquatic habitat over the long term. Restoration of fire regimes and restoring forest health at a landscape level would be achieved at a faster pace than alternatives A or C.	Same as alternative B but would take longer than to restore fire regime and forest health at a landscape level.	Alternative D restoration treatments would provide benefits to maintaining water and soil quality and watershed condition over the long term as compared to the other alternatives. Alternative D would increase the pace and scale of acres of riparian vegetation improved and meadows restored compared to alternative A. The pace and scale is similar to alternatives B and B-modified for restoration of fire regimes and restoring forest health.

Resource	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Wildlife, Fish and Plants At-risk terrestrial species	Continues to manage federally listed species through project-level consultation and consideration of recovery actions in approved recovery plans. Manages for Regional Forester sensitive species through project-level design and analysis of consequences. Continues to manage limited amounts of sagebrush habitats for sage-grouse through project level actions identified in the Bi-State Action Plan. Has the most limited ability to mitigate the continuing increase in large, high-intensity wildfires and build adaptive capacity of ecosystems to climate change. Therefore, presents a greater risk to the quantity and condition of habitat to contribute to the recovery of threatened and endangered species, conservation of proposed species, and support the persistence of species of conservation concern.	Stronger emphasis on coordination with U.S. Fish and Wildlife Service and CA Dept. of Fish and Wildlife for species protection and recovery than alternative A. Stronger protection for Sierra Nevada bighorn sheep reduces risk of disease transmission. Manages for species of conservation concern through combination of ecosystem and some species-specific plan components to provide ecological conditions and reduce impacts from threats. More sagebrush habitats improved for sage-grouse than alternative A. Alternative B is designed to achieve desired conditions in less time than alternative C by focusing on restoring large landscapes using a variety of tools, decreasing crown fire and moving high-severity fire effects toward natural range of variation. The treatment pace and scale is expected to move the landscape to moderate fire resilience within the first 10 years of plan adoption. Alternative B provides a more cautious approach than alternative D by tempering the pace of restoration. Habitat for these species would continue to be at risk due to large, high-intensity wildfires.	Effects similar to alternative B for federally listed species. Consequences for species of conservation concern similar to alternative B. Emphasis on sagebrush restoration similar to alternative B, but strategic fire management zones changed to recognize foothills sagebrush as general wildfire protection zone where most fires will be suppressed to protect sagebrush habitats. Similar to alternative B in the pace and scale to restore resilience at a large landscape scale.	Effects similar to alternative B for federally-listed species. Substantially increases the amount of sagebrush restoration, but some mechanical restoration may be slightly more difficult to implement with new recommended wilderness in the Glass Mountains. Direction allows some non-conforming uses for restoration to be allowed in recommended wilderness. Similar to alternative A in the limited ability to mitigate the continuing increase in large, high-intensity wildfires and build adaptive capacity of ecosystems to climate change. Alternative C is better than alternative A at addressing climate change.	Effects similar to alternative B for federally-listed species. Amount of sagebrush restoration for sage-grouse the same as alternative C but not as restricted using mechanical treatments in the habitats near the Glass Mountains. Similar to alternative B except that the pace and scale of restoration proposed under alternative D is expected to more quickly achieve resilience of the landscape to large-scale disturbances (such as insect outbreaks, high-severity wildfire effects, and drought-related tree mortality), thereby providing a greater long term benefit to terrestrial wildlife habitat quantity and condition. However the management approach has greater potential for short-term impacts to achieve improved habitat condition.

Resource	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Wildlife, Fish and Plants At-risk aquatic species	Limited implementation of restoration is expected to leave many areas containing native at-risk aquatic species vulnerable to impacts like sedimentation from large uncharacteristic fires.	Expanded direction related to invasive species should benefit aquatic species across all plan revision alternatives. While the negative effects of large-scale wildfires are expected to be significantly reduced, the increased pace of treatments translates into a higher risk of short-term disturbance to aquatic species and habitat conditions from mechanical and prescribed fire treatment actions until the habitat recovers. In the long term, the direction is expected to improve the resilience of the overall landscape to wildfire, result in more long-term beneficial effects to aquatic species, and better promote the long-term sustainability of aquatic habitats and greater ability of these habitats to adapt to climate change.	The emphasis in this alternative is building larger landscape-scale resilience to unpredictable events, to help species adapt. Connectivity in this and all alternatives is achieved through riparian conservation areas, and in this alternative through conservation watersheds provides increased upland connectivity for species. Additional direction to provide for at-risk species has been added where needed to complement the landscape scale approach. Direction focuses on restoration aimed to maintain or improve connectivity and refugia.	The additional critical aquatic refuges are intended to provide species protections but their management direction is restrictive, which could affect pace and scale of restoration in habitats important for at-risk aquatic species.	The emphasis on low- and medium-intensity fires across the landscape would improve long-term potential for improved habitat for aquatic species. Short-term impacts from mechanized treatments from ground-disturbing activities would be likely on the aquatic systems but it is expected there would be long-term benefits to these habitats.

Resource	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Wildlife, Fish and Plants At-risk plant species	The current forest plan for the Inyo National Forest does not include direction calling for the development of a whitebark pine conservation and restoration strategy. Inyo manages for whitebark pine as a sensitive species. Provides the necessary ecological conditions to maintain viable populations of plant species of conservation concern by relying primarily on project-level surveys and mitigations of adverse effects.	Restoration activities aimed at maintaining a viable population of whitebark pine would provide for the persistence of that species. Species monitoring from the regional ecology program would assist with developing management strategies. Alternative B would have more beneficial short- and long-term effects for whitebark pine than alternative A, due to the emphasis on forest restoration. Provides long-term benefits to plant species of conservation concern habitat extent and quality, resulting from ecological and hydrologic restoration, invasive species control, recommendation of wilderness that would protect some species of conservation concern plants, and from the emphasis on ecosystem resilience to climate change. Would also provide for persistence of plant species of conservation concern that occur in special habitats and address identified threats to special habitats.	Similar direction to alternative B (very minor editorial changes). Restoration effects are similar to alternative B. Some potential for more impacts in destination recreation areas but design of projects still emphasizing conservation of species.	Same as B-modified.	Same as B-modified

Resource	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Sustainable Recreation Recreation development and visitor use	Does not provide an integrated and adaptive approach to managing and operating sustainable recreation facilities, protecting sensitive resources or managing visitor use. Potential negative impacts to visitor expectations and experiences would be the highest without responding to visitor conflict, crowding, or changing uses.	Increased restoration activities means all plan revision alternatives provide greater potential to improve long-term sustainability of recreational opportunities and settings (even with short-term impacts). This alternative more effectively addresses recreation development than alternative A, but does not provide specific direction for an integrated and adaptive approach. Visitor use will continue to increase and because direction is based on recreation opportunity spectrum alone, but approach would be less adaptive. Visitor experiences and expectations could be negatively impacted without specific direction that prioritizes where staff manages visitor use and facilities.	Designation of Sustainable Recreation Zones provides direction to effectively manage recreation development in a changing environment. It recognizes there will be new and changing uses; and it uses an adaptive and integrated approach to designing and managing recreation infrastructure while protecting resources. Sustainable Recreation Zones provide the most benefits to managing visitor use and ensuring quality visitor experiences and expectations would be met while protecting natural and cultural resources. Visitor use would be managed adaptively to prevent impacts to other resources.	Same as alternative B	Same as alternatives B and C

Resource	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Recommended Wilderness Potential effects on recreation settings and opportunities, access, and recreation management	No impact to existing motorized or mechanized (mountain bike) opportunities; however, without new wilderness recommendations, there would not be additional long-term social or ecological benefits derived recommendations, and no increase in wilderness recreation opportunities for nonmotorized users.	No impact to existing motorized or mechanized (mountain bike) opportunities; however, wilderness additions would limit future development of mountain bike and off-highway vehicle opportunities. There would be expanded wilderness recreation opportunities for nonmotorized users seeking backcountry day-use and overnight opportunities.	Same as alternative B	The most beneficial to nonmotorized recreation opportunity settings. Some existing mountain bike use would be affected where recommended wilderness areas include existing mechanized trails. Would have greatest impact to limiting future development of mountain bike and off-highway vehicle opportunities.	The trade-off to the increased pace and scale of restoration activities is that there would not be additional long-term social and ecological benefits in the absence of recommending new wilderness areas. These lands could be susceptible to uses that would be incompatible with wilderness designation if kept in the existing management status, even though currently managed as inventoried roadless areas.
Recommended Wilderness Potential effects on vegetation, fire, wildlife habitat, and watershed management	A full suite of management tools would be available to conduct fuels, fire management, and restoration activities; however, without recommending wilderness areas, there would not be additional social and ecological benefits.	Large-scale fuels treatments and restoration activities would be more limited in areas recommended for wilderness; however, the ecological and social benefits of adding adjacent wilderness areas would outweigh the management challenges of conducting fuels and vegetation management activities. The impacts of managing sage-grouse habitat on wilderness character would be minimal given the small amount of habitat inside the wilderness addition.	Similar to alternative B, except there would be beneficial effects to Cottonwood-Crooked Creek Headwaters Conservation Watershed in the proposed White Mtn. east and west additions. Future development would be prohibited, which would maintain the watershed condition rating of relevant indicators.	The challenges of managing habitat for sage-grouse and conducting other restoration activities would outweigh the potential ecological benefits in this alternative due to the large amount of recommended wilderness acres recommended. A lack of restoration activities due to these management challenges could ultimately put resources at risk within recommended wilderness.	A full suite of management tools would be available to conduct fuels, fire management, and restoration activities at an increased pace and scale; however, there would not be additional ecological or social benefits derived from recommending wilderness areas.

Resource	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Recommended Wilderness Potential effects on other uses	No adverse impacts would occur since no wilderness would be recommended.	No adverse impacts to water rights, water uses, grazing, Tribal uses, or mining claims since these uses would be allowed to continue in recommended wilderness. The tradeoff would be that wilderness recommendation could increase the cost and complexity of maintaining facilities or uses because of the need to use nonmotorized access and nonmechanized means of maintenance. As a result, the annual operating costs for these uses would have the potential to increase. The extent of potential cost increases is uncertain at programmatic level. Management of recommended wilderness would prohibit access by motorized vehicle and mechanized equipment for maintenance of stock water developments, salt placement and potentially restrict installation of new range improvements (water troughs) and could increase costs for ranchers.	Same as alternative B	Same as alternative B, but annual operating costs would have the potential to increase to the greatest extent under alternative C due to greater amounts of recommended wilderness. The extent of potential cost increases is uncertain at programmatic level.	Same as alternative A

Resource	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Recommended Wilderness Wilderness character	No impacts since no new wilderness recommended	The impacts of managing sage-grouse habitat on wilderness character would be minimal given the small amount of habitat inside the addition.	Same as alternative B	Would likely be impacts to wilderness character from restoration activities required to adequately maintain sage-grouse habitat and conduct other restoration activities, which would likely impact the untrammeled quality of wilderness character because conifer removal and prescribed fire activities would be evident, at least for short-term periods.	No impacts since no new wilderness recommended
Pacific Crest National Scenic Trail Corridor	No changes	Provides protection for the resources, qualities, values, and associated settings and primary uses of the Pacific Crest National Scenic Trail. No system roads or trails are proposed to be closed or changed in management or use on trail related to the Pacific Crest Trail Corridor. Since there are no existing permits for recreation events on the Pacific Crest Trail, there would be no displacement of permittees. The prohibition of new events would decrease the potential for displacement of and conflict with the primary Pacific Crest Trail users, hikers (including individual trail runners) and equestrians. Three miles of the Pacific Crest Trail outside of wilderness would be closed to recreation events. Recreation events could occur on the remaining 587 miles of trails outside of wilderness on the Inyo.	Same as alternative B	Same as alternative B but given the number of acres in the management area, provides the most protection for the resources, qualities, values, and associated settings and primary uses of the Pacific Crest National Scenic Trail.	Same as alternative B

Resource	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Forest Products	Would continue management at current levels of mechanical treatments, with limited improvements in forest health and resilience to disturbance agents and climate change at the project (stand) level. Landscape resilience would continue to decline.	Could potentially increase pace and scale of mechanical treatments from the existing conditions, incrementally improving forest health and resilience to disturbance agents and climate change. Would increase fuelwood availability.	Same as alternative B	Would decrease the pace and scale of mechanical treatments from the existing conditions thereby decreasing forest products production; however, small improvements in forest health and resilience would be expected to occur in the short term at the project (stand) level, similar to alternative A.	Would increase pace and scale of mechanical treatments from the existing conditions, improving forest health and resilience to disturbance agents and climate change. However, the absence of infrastructure may limit achievement of desired objectives. Would increase fuelwood availability.
Production Livestock Grazing	Gradual improvement in ecological conditions in allotments likely to continue in this and the action alternatives based on current direction.	Modernizes current direction and analysis procedures (now found as a technical guide outside of the plan) to provide modest improvements in riparian conservation areas and resilience to disturbance and climate change at the allotment level.	Same as alternative B	Same as alternative B	Updates same as alternative B. There would be no effects related to recommended wilderness.
Economic Conditions	The continuation of current management activities in the face of current resource conditions (such as vegetation) and trends is expected to result in more disruptive events, such as uncharacteristic wildfire, and additional declines in forest health. This could have adverse short- and long-term effects on economic benefits to local communities, and could affect opportunities in terms of recreation and other economic benefits.	Alternative B would have long-term beneficial effects on economic conditions in local communities and on the Inyo National Forest. In the short term, there is the potential for disruption to some of these benefits from increased activities.	Same as alternative B	Alternative C would have some long-term beneficial effects on economic conditions in local communities and on the Inyo's benefits to people's lives. However, there is a long-term loss of the opportunities for developing local biomass industries as a result of this alternative.	Would be similar to alternative B. The increased pace and scale of restoration could potentially provide even greater benefits; however, it could also lead to potential increases in the short-term adverse effects resulting from these restoration activities.

Resource	Alternative A	Alternative B	Alternative B-modified	Alternative C	Alternative D
Social Conditions	Contributes to sustaining a diverse set of forest-related values in the long term, but is not as integrated as the plan revision alternatives.	Supports a diverse set of forest-related values in the long term through increased ecological restoration that moves forest conditions closer to ecosystem desired conditions and fire-resilient landscapes. By moving toward these desired conditions, aesthetic, biodiversity, cultural, economic, learning, recreation, and well-being values are sustained over the long term.	Same as alternative B	Values are more at risk to negative impacts over the long term given limited ecological restoration treatments.	Same as alternative B.